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AUTHOR Halle, James W.
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ABSTRACT

This paper presents a functional approach to assessment and associated program development for individuals with severe disabilities, with emphasis on informal strategies that target beginning communicative levels. In the first section, form, function, and context (three components of any communicative act) are defined and described. Three assessment strategies which scrutinize each of these components are then surveyed--these include interviews, observations, and analogues (in which a variety of variables are systematically manipulated to observe effects on communicative performance). The third section delineates the goals associated with form, function, and context which facilitate decision making. Concerns about utilization and dissemination of innovative assessment practices are addressed in the fourth section, including: (1) what is known about communication assessment practices for this population; (2) methods of disseminating the knowledge base to practitioners; (3) the role of "best practices" in dissemination and utilization; and (4) prioritization of assessment practices. Attachments include examples of communication interviews, an observational recording protocol, structured protocols for evoking specific communicative functions, and an intuitive analysis of variables relevant to teaching social greetings. (Lists 52 references and 13 additional resources.) (Author/DB)

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Innovative Assessment Measures and Practices Designed With the Goal of Achieving Functional Communication and Integration

by
James W. Halle, Ph.D.
University of Illinois at Urbana-Champaign

Curricula for individuals with severe disabilities have undergone a radical change in the last 20 years. Goals have shifted from a focus on prerequisite skills referenced to a normal-development model to a focus on teaching age-appropriate skills referenced to natural environments in which people function. Accordingly, assessment practices have changed dramatically to keep pace with curricular modifications. Changes in perspectives and values also have accompanied this movement. The communicative efforts of individuals with severe disabilities now are characterized as logical adaptations to their social and physical environment instead of deficits (relative to norm groups) in need of remediation.

The ideas and strategies presented in this paper reflect a functional approach to assessment.[1] *In the first section, form, function, and context (three components of any communicative act) are defined and described. Three assessment strategies (interviews, observations, and analogues) which scrutinize each of these components are surveyed in the second section. The third section delineates the goals associated with form, function, and context which facilitate decision-making. Finally, pressing concerns about utilization and dissemination of innovative assessment practices are identified in the fourth section.*

Status of the Field in Communication Assessment

Curricular considerations for individuals with severe disabilities have undergone a radical change in the last 20 years (Brown, Branston, Baumgart, Vincent, Falvey, & Schroeder, 1978; Mirenda & Calculator, this volume; Snell & Grigg, 1987). The focus has shifted from developing prerequisite skills (e.g., fine and gross motor) or skills referenced to a normal-development model to teaching age-appropriate skills that are referenced to the natural living, learning, and working environments in which people function. Most recently, preparing learners with severe disabilities to live, learn, and work in integrated settings has become the ultimate objective.

Assessment strategies and practices necessarily have been transformed in an attempt to keep pace with the curricular changes (Cipani, 1991). A more functional approach has evolved, one that maintains a focus not only on a learner's

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communicative repertoire but also on the context (i.e., social partners, physical settings, opportunities) in which the communication occurs. This evolution represents a substantial shift in the assessment process, a shift that recognizes how central the social context is in determining communicative behavior. As a result of this approach, the focus of assessment is equally distributed among the individual's communicative repertoire, the context in which the repertoire is displayed, and ultimately the relationships that form between the communicator and the communication context (including social partners). As Peck et al. (1986) have suggested, a functional approach to assessment assumes that individuals with severe disabilities behave in *adaptive* ways to ongoing changes in their environment. This approach contrasts sharply with the traditional one that identifies *deficits* in reference either to a norm group or to normal developmental milestones.

Basically, assessment is undertaken to facilitate decision-making. Either a decision or a question should drive any assessment effort. The information derived from assessment data may serve any of three critical functions: (a) screening for identification purposes to access appropriate services; (b) providing information to fashion appropriate interventions; and (c) providing ongoing evaluation before, during, and after intervention. All three of these functions will be served by the strategies described herein. Whether we talk in terms of functions or decision-making, the quality of the information gleaned from assessment efforts will determine who receives services and the quality of the services we can deliver.

A convenient way to discuss assessment is to divide the strategies into formal (or standardized) and informal means. Traditionally, standardized tests have been the means employed to evaluate communication skills. These tests are used primarily for screening and diagnosis. Standardized tests are either norm-referenced (based on comparisons made between a norm group and the learner) or criterion-referenced (based on checklists of normal developmental milestones). In neither case do these assessments permit identification of functional skills or functional variables affecting communicative repertoires. Table 1 presents four major concerns with traditional assessment strategies elaborated by Peck et al. (1986) and Cipani (1991).

The goal of this paper is to enumerate strategies and practices for assessing the functional communication skills of individuals with severe disabilities. However, this paper will focus only on *informal* assessment strategies and practices that target a beginning communicative level in which learners are engaging in nonsymbolic behavior and early language repertoires. Not discussed in this paper will be assessment practices for learners

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Table 1

Major Concerns with Traditional Assessment

Focus on Deficits	A focus on discrepancies between normative and observed behavior leads to the identification of "deficits" in performance as curricular priorities. The assumption that the behavior of normally developing children is an appropriate goal for learners with severe disabilities is questionable.
Clinical Milieu	The assessment situation is clinical: distraction-free and adult-directed. Test items are verbally mediated. It is often unclear whether learners with severe disabilities comprehend either the language directed to them or the task at hand.
Context Variables	The context of the assessment situation contrasts sharply with natural social contexts; thus, the communication sampled is quite limited. Traditional assessment maintains a focus on the communicative performance of the learner, independent of the context in which such communication naturally occurs. Such as omission underestimates communicative competence.
One-time Sample	Allowing only one opportunity to reveal communication skills may not provide an accurate picture. Variability in performance from day-to-day or from morning to evening may be due to an infinite number of influences. Thus, assessment may yield unreliable or invalid information. An unfamiliar adult (the assessor) alone may differentially affect the performances of different learners.

with the *most* severe disabilities or for those with sophisticated language repertoires (e.g., contextually appropriate phrases or sentences, or conversations that are flexible, involve multiple turns, and employ social conventions). Please refer to the Resources section of this paper for literature pertaining to these excluded topics.

Consistent with a functional assessment approach, any communicative event consists of three interrelated components: form, function, and context. These three components constitute a major organizing theme for the remainder of the paper. Each will be defined, and examples will be provided later in this section. Applications of functional assessment strategies that focus on form, function, and context will be introduced, and examples of these applications will be described in the section entitled "Designing More Functional Assessment Formats." Assessment goals related to form, function, and context will be discussed, and a novel assessment strategy will be recommended in the third section, "Using Assessment Information to Make Better Decisions." In the final section, "Enhancing Utilization and Dissemination," concerns about current efforts to translate research to practice will be discussed.

Definition and Description of Communicative Form

The form that communication assumes also has been referred to as the topography, structure, mode, or modality of communication. It consists of the physical movements that comprise the communication, varying from the vocal musculature active in speech, to gestures, signs (e.g., ASL, SEE), and facial expressions, and to challenging behavior (e.g., aggression, self-injury). Communication forms have been divided into categories or classes that share common characteristics. For example, Reichle (1992) divides communicative form into three broad categories: verbal, gestural, and graphic. Each broad category is divided further into two subclasses (e.g., the verbal category contains verbalizations or speech and vocalizations). Historically, communication intervention has focused on the symbolic or linguistic categories. According to Reichle's taxonomy, these would include verbal, graphic, and sign. Only recently have researchers and practitioners begun to address nonsymbolic forms such as gestures or other behavior as communicative in function (O'Neill, Horner, Albin, Storey, & Sprague, 1990; Warren, Yoder, Gazdag, & Kim, in press).

McLean and Snyder-McLean (1988) delineated three classes of "intentional" communicative forms: primitive, conventional, and referential. *Primitive* forms are direct motor acts on objects and people, such as turning away from an unpreferred object or leading a listener to a desired object or activity. *Conventional* forms do not necessarily involve direct contact with an object or person. These might include pointing to or displaying an object, or gesturing for an object or for the attention of another. *Referential* acts include the use of symbolic forms or linguistic structures such as speech, sign, or graphic systems. Although

many additional taxonomies of communicative forms have been generated (e.g., Cirrin & Rowland, 1985; Halle, Chadsey-Rusch, Collet-Klingenberg, & Reinoehl, 1990; Reichle, 1992; Siegel-Causey & Guess, 1987; Vicker, 1985), the important aspect for assessment purposes is to identify those forms that are currently functioning as communication for the target individual.

Definition and Description of Function

In the discussion above pertaining to communicative form, an assumption was made that the behavioral topographies were indeed communicative. None of these topographies in isolation obtains the status of communication; rather, a listener needs to be present or available to mediate or respond to the message. To the extent that a contingent relationship develops between specific behavioral topographies of a "speaker" and changes in the environment mediated by a listener, communication is evolving.

Communicative function has been defined from the perspective of at least two different conceptual systems. One perspective is that of pragmatics. Pragmatics is the study of communication within a social context. Pragmatic functions have been elaborated in the child language literature and include such functions as requesting, protesting, commenting, and greeting. Various taxonomies of pragmatic function are summarized and compared in a table in the Reichle, Feeley, and Johnston paper contained in this volume. Within the perspective that communication occurs within a social context, all communicative acts have a function in terms of the speaker's intent (i.e., the speaker intends to affect the listener in particular and specified ways). For example, Wetherby and Prizant (1989) describe such factors as alternating eye gaze between object and listener, persistent signaling until the goal is accomplished or failure is indicated, and awaiting a response from the listener as behavioral evidence for intentionality.

A second perspective on communicative function is represented by Skinner (1957), who categorized communicative acts by their effect on listeners. He offers an elegant analysis of how a behavior may become communicative in the context of this latter approach. An infant's cry may be undifferentiated and devoid of intent soon after birth. However, in time, the mother's responses to the infant's cries under particular conditions may confer function to the crying. For example, cries may produce a bottle or being picked up or a change of diapers. Over time, a child may learn to cry when hungry, when wanting attention, or when wet. Parents often report they can differentiate cries that signal one or another intent.

From this conceptual orientation, communication functions to access reinforcers or to escape or avoid unpleasant situations. Perhaps the best illustration of assessment and associated intervention emanating from this perspective is the work of O'Neill et al. (1990) and Horner, O'Neill, and Albin (1991). Although these investigators focus on challenging behavior among learners with severe disabilities, their strategy of assessment is applicable to communication. In fact, much of the

challenging behavior exhibited by those with more severe disabilities (and by others) may be communicative (see Durand, this volume).

Another aspect of communicative function can be distinguished in the context of dyadic interaction: Any communicative act can be categorized as initiating, maintaining, or terminating an interaction (McLean, Snyder-McLean, Brady, & Etter, 1991). This aspect has implications for communication assessment when multiple-turn interactions are the goal. For example, if a learner successfully acquires a request function and uses it in a flexible generalized fashion, one goal may be met (i.e., teaching generalized requesting), but such a skill in isolation necessarily restricts the learner to the role of initiator in social interactions. Assessing learners' use of their communicative repertoires to initiate, maintain, and terminate social interactions ought to be included in any comprehensive assessment of communication. Reichle (1991), Reichle, Halle, and Johnston (1993), and Reichle and Sigafoos (1991) provide extensive discussions of teaching implications based on these three components of social interactions.

Definition and Description of Context

As it is used here, context is a rather general term and encompasses a wide-ranging set of conditions that occur prior to, concurrent with, or subsequent to a communicative act and determine the probability of the act itself, as well as its form and function. To give more meaning to the term, a sampling of different perspectives is offered here. Some examples focus on a specific component of context, while others attempt to be comprehensive in scope.

Investigators working within an applied behavior analysis framework have used an A-B-C (Antecedent-Behavior-Consequence) model to facilitate an assessment of the conditions that influence communicative behavior. To date, the function of consequences (as positive or negative reinforcers and punishers) has been elaborated in more depth than antecedents. Although useful for encouraging assessors to focus on antecedent events and conditions, the term *antecedents* has been too nondescript and interpreted too simplistically to be of substantial value. Until recently, antecedents have been defined as discrete stimuli (e.g., the presence of a cookie or a question by another) that occur either immediately before or concurrent with the communicative act.

Emanating from this same conceptual framework are terms that begin to capture the needed complexity of an analysis of communicative behavior. For example, Kantor (1959) coined the term *setting factors;* this term was later renamed by Bijou and Baer (1961, 1965) and Wahler and Fox (1981) as *setting events.* These events or conditions may include deprivation/satiation states; illness, pain, or infection; presence/absence of objects, materials, or people; and recent history of interactions. What is unique about the recognition of setting events is that applied behavioral investigators are beginning to assess factors that are more complex (e.g., prior history), more difficult

to measure (e.g., internal states), and further removed in time from the behavioral event.

More descriptive than antecedents and more encompassing than setting events are frameworks offered by Bijou and Baer (1978) and Peck (1989). Each represents a somewhat different way of dividing the "context" pie.

Bijou and Baer (1978) described four sets of variables that need to be considered in any assessment effort: physical, chemical, organismic, and social. Drawing on Bronfenbrenner's (1979) conceptualization of three levels of ecological factors influencing child development, Peck (1989) distinguished three levels of environmental variables affecting communicative interactions: (a) dyadic variables (e.g., specific partner behaviors, interaction styles); (b) situational variables (i.e., extent to which daily occasions provide motivation, opportunity, and responsive outcomes for communicative acts); and (c) setting variables (e.g., characteristics of the school, home, and community environments).

Kaiser and Warren (1988) capture the complex interplay of contextual variables in determining speech acts:

> Context is more than who is present, when, with what objects, and immediate environmental setting. These dimensions are important, but they do not exhaust the range of utterance-external variables that affect the use and interpretation of verbal behavior and that must be considered among the set of potential controlling stimuli. For example, part of the context is language directed to the child and language by the child that precedes an utterance. Aspects of the immediate social relationship between the child and others (e.g., eye contact, body orientation), past history shared by the child and others present (including previous reinforcement history), and numerous other events (occasion, form, and content of previous utterances) are also contextual-stimulus variables. (p. 409)

Designing More Functional Assessment Formats

Researchers and practitioners (e.g., Halle et al., 1990; Peck et al., 1986; Peck & Schuler, 1987; Reichle & Yoder, 1979; Snyder-McLean, Rogers, & Etter, 1987) have developed three generic methods for assessing the communicative competence of learners with severe disabilities: interviews, direct observation, and analogues. The latter method has been given many different labels (e.g., systematic manipulations, structured protocols, contrived communicative situations, simulations), leading to some confusion in the field. Each of these methods permits an evaluation of the three interrelated components of a communicative act (i.e., form, function, and context). They provide an assessment of skills not addressed by traditional standardized or criterion-referenced tests by including

multiple sources of data (triangulation), repeated measures over time, and evaluation within natural(istic) contexts. In the section that follows, the methods will be defined and described, and then the manner in which they provide an assessment of communicative *form, function, and context* will be elaborated. Table 2 contains questions that may be answered and the focus of information obtained when implementing these three generic strategies.

A task prerequisite to the implementation of these methods involves compiling a record of the learner's communication history. This is composed of past intervention efforts, current residential, school, work, and community environments, and the most recent assessment of the learner's level of communication (see Table 3 for an example of a Communication History form). It would be a mistake to assume that everything done before the present time is irrelevant or unimportant. Thus, when practitioners embark on the task of assessment, they should capitalize on what is already known.

Communication Interview

Who should be involved. The communication interview is conducted to gather information about a learner's communication skills from the perspective of those who are familiar with the learner, such as a parent, a teacher, a group home manager, a sibling, an employer, or a co-worker. A critical element of the interview is that it be conducted with a number of interviewees who have different relationships with the individual across varying situations and settings (e.g., home, school, work, community). The person conducting the interview may be one of the familiar people mentioned above or may be a person less involved in the learner's environment (e.g., a consultant, related service personnel).

Information gathered. Specific information obtained from the interview includes the forms the learner uses to communicate, his or her communicative intents or functions, and the social and physical context in which the learner communicates. This information may be useful in multiple ways: (a) to assist in planning interventions; (b) to assist in determining the content of the analogues; (c) to compare to the information gathered by the other two methods (direct observation and analogues), to assess the correspondence among the methods; and (d) to assess reported communicative performances across varying people and settings.

Two examples of communication interviews are located in Attachment A, which is presented immediately following the listing of references and resources at the end of this article. Please note that, in one case (Peck & Schuler, 1987), the exact forms are listed; in the other (Halle et al., 1990), classes of communicative forms are enumerated. In either case, the interviewer simply checks the column that matches the form identified by the interviewee. By scanning the page vertically, a visual pattern of the learner's communicative forms is revealed. For example, if only one or two columns are marked repeatedly, it is clear that the variety of

Table 2

Functional Assessment Strategies and the Type of Data They Collect

Questions	Strategies	Focus
How learner currently communicates	**Communication Interviews** **Direct Observation** **Analogue Assessment**	Form Function Context
What learner is capable of communicating	**Analogue Assessment**	
What learner needs to be able to communicate	**Ecological Analysis**	Reference point: given an environment
	General-Case Analysis	Reference point: given a communicative function
	Intuitive Analysis	Reference point: given the experience of fluent language users

Table 3
Communication History Form*

Completed by: _____ Date: _____

Student's Name: _____ Age: _____

Current Communication System

__ Graphic	__ Gestural	__ Verbal
Symbols used: __ Mayer-Johnson PCS __ PIC __ Photographs __ Bliss __ Logos __ Other Symbol size: _____ Symbol display: __ Board __ portable Approximate __ permanent size: _____ __ Wallet __ single page __ # of pages __ multi-page __ Isolated symbol(s) # of symbols ___ __ Other _____	Type of sign: __ ASL __ SEE __ Natural Gesture __ Other _____ Approximate # of signs: _____	Intelligibility: 1——2——3——4——5 Low High MLU: _____ Vocabulary size: _____ _____

Current Communication Settings

Living Environment	School Settings	Work Settings	Community Settings
__ With family # of members _____ Ages of siblings: _____ __ Group home # of residents _____ Ages of residents: _____ __ Other situation: _____	__ Integrated setting (yes/no) __ School level __ primary __ middle school __ junior high __ high school __ other _____ __ Classroom type __ integrated (i.e., mainstreamed) __ segregated (i.e., only persons w/MR) __ Integrated activities __ lunch __ P.E. __ breaks __ home-ec __ other _____	__ Integrated setting (yes/no) __ nonhandic. workers __ same age workers __ ratio of nonhandic. workers to workers w/disabilities __ Hours worked __ 5-10 per week __ 10-15 per week __ 15-20 per week __ 20-30 per week __ 30-40 per week __ Type of work (describe) _____ _____ _____ _____	__ Community-based classroom (yes/no) __ Hours spent per week in community __ 0-5 per week __ 5-10 per week __ 10-15 per week __ 15-20 per week __ Other _____ __ Community settings __ restaurants (# of) _____ __ grocery stores (# of) _____ __ other stores (list) _____ _____ __ Other settings (list) _____ _____

* Halle et al. (1990). The Communication Strategies Project.
Attach a copy or listing of the symbols, signs, or words in the learner's repertoire.

Table 3
Communication History
(continued)

1. How have people attempted to teach this system? (i.e., instructional procedures)

2. Which of these procedures have appeared to have some success?

3. Which of these procedures have not appeared to be successful?

4. Does the learner use all of the vocabulary items in his or her present system? If not, which ones does he or she generally not use?

5. How were the vocabulary items selected?

6. Does the learner need to be prompted to use his or her system? If so, what types of prompts are necessary?

7. Does the learner have his or her communication system with him or her, accessible to use all the time?

8. Does the learner use his or her communication system in a spontaneous manner? Give an example.

9. Does the learner need to use his or her primary communication system in all settings? If not, which ones do not require it? Why?

10. Do others in the learner's environments use the same or similar modes for communicating? If not, (a) list the number of individuals who use verbal communication: ___; (b) list the number of individuals who use graphic systems of communication: ___; (c) list the number of individuals who use gestural systems of communication: ___.

11. How do others who use different communication systems interact with the learner?

12. How many students are in the same classroom with the learner? ___ How many people does the learner work directly with in the job placement site? ___ How many people (on average) does the learner interact with during community training times? ___

forms is quite restricted. Furthermore, if almost all of the columns marked are on the left side of the page, then the forms used are more primitive and idiosyncratic as opposed to conventional and symbolic (which are marked on right side).

Communicative function is the organizing theme for both the Halle et al. (1990) and the Peck and Schuler (1987) interview assessments. In both, functions are evaluated by posing questions that delineate the context in which communicative acts defining that function are likely. Examples of questions posed are: "What if child wants adult to look at him/her?" or "How does child get preferred significant other (identified earlier in the interview) to pay attention to him/her?" For either question, if the respondent recalls a response form used to obtain attention, then information is gained about both form and function. In contrast, if the respondent does not recall a response form used for this purpose, then it remains unclear whether the learner possesses the function or not.

In all three types of assessments, function cannot be separated from (evaluated independently of) context. The context sets the occasion or provides the reason/motivation for the communicative act. In both Halle et al. (1990) and Peck and Schuler (1987), generic questions that represent context are posed. Halle et al. begin the interview by gathering information on learner likes/dislikes in terms of people, activities, objects, consummables, and settings. This information is then infused throughout the interview to individualize the context/questions to the learner being assessed.

Although the communication interview is a relatively efficient means of gathering information about the learner's form, functions, and context, some limitations are noteworthy. The accuracy of the information depends on the memory and accurate reporting of the interviewee, as well as on the protocols of the interview itself (e.g., how well the questions reflect the communicative competence of learners, how questions are posed -- do they "lead" the respondent?). Furthermore, especially when the forms identified are prelinguistic, the relationships among form, function, and context are suspect and require substantiation by the other two methods.

Direct Observation

Purpose. The second major method of assessment is *direct observation.* This method entails observing the learner in his or her natural environment without imposing any restrictions on behavior. Direct observation permits an independent assessment of some of the information gathered in the communication interview. Direct observation may be specific and circumscribed, such as gathering information on a specific communication target, or requesting items at mealtime, or it may be more general and exploratory, such as gathering data all day long for two weeks to identify multiple occasions for communication and the varied forms and functions used by the individual in his or her everyday settings.

Who should observe. O'Neill et al. (1990) have offered a number of recommendations. Observational data should be

gathered by people who are in direct contact with the individual observed (i.e., natural social partners), such as family members, school personnel, residential and vocational staff, and peers. If multiple people are involved in the observations (e.g., exploratory observations mentioned above), it is critical that they record consistently with one another. This requirement necessitates varying levels of training, depending on the complexity of the observational system. If more than one potential recorder is present when an observation is to be conducted, a designee must be assigned in advance. Recording consistency is also crucial for assessing accuracy and replicability when only one observer is recording, a situation that may be more typical than multiple observers.

Formats and information obtained. Direct observation assessments may assume varying formats (e.g., Alberto & Troutman, 1990; Halle et al., 1990; O'Neill et al., 1990; Peck & Schuler, 1987). For example, simple A-B-C (antecedent-behavior-consequence) analyses have been used where the antecedents (e.g., social partners, activities, demands, physical setting, time of day, setting events) occurring prior to or concurrent with a communicative act are recorded; the communicative act (form) itself is described, as is the consequence or environmental effect following the act. Because such analyses focus on communicative acts, they omit at least one crucial category of variables: occasions when communication clearly was required or would be appropriate but was not produced by the learner. The assessment of such "obligatory" occasions demands additional strategies.

Often, these A-B-C analyses are not simple; rather, they permit the gathering of a great deal of information relevant for an assessment of communicative competence of individuals as they function in their natural environments. Halle et al. (1990) have fashioned an observational recording protocol that borrows heavily from one developed by O'Neill et al. (1990) in order to assess challenging behavior. (This protocol is presented in Attachment B.) The recording form contains four major categories: (a) the form used by the "speaker;" (b) the antecedents that may have occasioned the communicative act; (c) the function the act served for the "speaker" (e.g., motivation); and (d) the consequences of the act mediated by the listener (e.g., responsiveness of the social environment). These data are difficult to gather and are labor-intensive. The reliability of determining the function of each act has been a challenge, because it requires a judgment about intent. The response to this problem has been to use the listener's response as a determinant. Invoking Wetherby and Prizant's (1989) criteria for assessing intent might be helpful.

Peck and Schuler (1987) developed a different observational format in which they organized learner communicative behavior according to its function within a social exchange: initiate, respond to, maintain, and terminate. Their focus was not on quantification of these communicative events but, rather, on detailed descriptions of response forms and context variables. Depending on the observational

format, the types of information obtained vary greatly and may include: (a) identification and quantification of communicative forms and/or functions; (b) contextual variables (e.g., presence/absence of people or materials, settings, activities, responsiveness of listeners) that are associated with the communicative acts; and (c) contexts in which communication is unlikely or unnecessary. This last information source, which is prominent in the evaluation of challenging behavior, is often overlooked in communication assessment. Yet it may be crucial for implementing effective integration plans. For example, if a young child's communicative repertoire is quite limited, but his motor skills are similar to those of his nondisabled peers, then introducing integration efforts in contexts that capitalize on the child's competence may produce an initial impression that enhances positive outcomes by insulating the child from the stigma associated with incompetent behavior or failure.

After completing observations, we still do not know whether any particular antecedent (or a combination of them) or consequence is related functionally to the communicative act; we only know the sequence. Thus, direct observation as an assessment method suffers from the same limitation attributed to the interview method. To the extent that we observe repeated instances of or consistency in particular antecedents preceding (or consequences following) particular behavior, functional relationships become more probable, but they must await analogue assessment for more definitive conclusions. Another limitation of direct observation is the expense in terms of time required, time that has opportunity costs (i.e., could be spent in other functional ways). When direct observation is used, efficiency may be optimized by selecting observation times with a high probability of communicative attempts. Capitalizing on information gathered in the interview may permit strategic selection of times and contexts.

Analogue Assessment

Formats. This method of assessment consists of the systematic manipulation of a variety of variables to observe directly their effects on communicative performance. Analogues may assume a number of formats that vary from naturalistic (i.e., approximate conditions operating in the natural environment) to contrived (i.e., conditions that optimize the probability of a communicative response regardless of their ecological validity).

Snyder-McLean et al. (1987), Halle et al. (1990), Peck and Schuler (1987), and others have developed "structured protocols" to evoke specified communicative functions (see Attachment C). For example, known preferred objects or materials may be placed in their natural containers that the learner cannot access without help. Or a teacher or parent may "accidentally" pour ketchup on the table and floor to see how a learner will respond. Both the form and the function may be assessed in the presence of these challenge probes. Although the form used by the learner may be in question, if a response occurs, the communicative function

expected on the former occasion would be a request; in the latter, a comment.

When to conduct. When considered in the context of the findings derived from the other two methods of assessment, analogues might be conducted at different points in the assessment sequence to answer specific questions arising from the other assessments. For example, they might be conducted immediately after the Communication Interview when it has revealed potential targets that occur infrequently in natural environments. Analogues permit the assessor to increase, albeit artificially, the opportunities for the display of such targets. The conditions that are thought to evoke the communicative act can be contrived or simulated to confirm or disconfirm what was suggested in the interview. After administering the interview and observing directly in natural settings, assessors may have narrowed the field of potential variables influencing targeted acts. To test the veracity of the relationship between these variables and the communicative behavior, analogues can be administered in such a way that environmental variables might be repeatedly presented and withdrawn to determine the consistency of communicative behavior under the two conditions (O'Neill et al., 1990). For example, variables relevant for requesting might include the presence of preferred objects or materials, asking a question, or encountering a physical barrier while walking. Such procedures can produce compelling evidence about the role of particular variables in affecting communicative performances.

To illustrate, assume that on some occasions preferred materials are made visual but inaccessible, and on other occasions nonpreferred materials are visible but inaccessible. If requests (regardless of form) occur on the former occasions and not on the latter, then it would seem that both status as "preferred" and presence of the material are functional contextual variables. Assume further that the listener on all prior occasions was quite familiar to the learner. We now may assess familiarity of the listener as a factor by varying the listeners according to their familiarity, using analogues identical to the ones described above, which produced consistent requesting. To the extent that we see discriminated responding by the learner (e.g., while in the presence of familiar listeners but not in the presence of unfamiliar listeners, the learner requests preferred materials when they are seen but out of reach), we have evidence that familiarity of the listener *in this context* is a functional variable occasioning requests (for more information, refer to the section on Multiple or Conditional Control).

Finally, analogues may occur at any time in the assessment process as "challenge" probes. Touchette (personal communication, 1991) used this term to describe analogues conducted to assess the effectiveness of intervention with challenging behavior. These probes consisted of programming occasions known to produce the target behavior to evaluate learners' responses after intervention is underway. Iwata, Dorsey, Slifer, Bauman, and Richman (1982) used a similar strategy, but their analogues were more generic

in origin. Their purpose, however, was similar: to assess conditions thought to be influential in producing challenging behavior. The parallel in communication assessment is the structuring of occasions that provide optimal conditions for anticipated performances.

Using Assessment Information to Make Better Decisions

Goals Related to Form

Although form cannot be considered independently of function and context, it is safe to identify the major goal of assessing communicative form without reference to these other two components. We should always be striving to teach or facilitate more conventional and more sophisticated forms of communication -- forms that permit users to more accurately and more precisely communicate their intent so that it will be understood by the listener. Reichle, Halle, and Johnston (1993) provide a framework for decision-making about maintaining or elaborating current forms versus establishing new ones. Three considerations are relevant.

First, although we are always attempting to establish more conventional and sophisticated forms, on some occasions less conventional or even primitive forms may be most efficient (and are, indeed, used by fluent speakers). For example, pointing (a conventional form) permits a speaker to interact with a listener without interrupting an ongoing conversation; similarly, when one's mouth is full of food and a server comes with a pot of coffee, presenting an empty cup (a primitive form) is efficient, socially acceptable, and clearly communicative. Finally, on a cold day, when an acquaintance drives by in her car with the windows closed, a wave is eminently more appropriate than yelling "Hi!"

> We do not believe that the interventionist's task in establishing communicative forms is to move from primitive to more conventional gestures without regard to the learner's existing repertoire. Instead, the task is to use the learner's existing repertoire and carefully determine which aspects of it can be blended or shaped into a well-planned system. (Reichle, Halle, & Johnston, 1993, p. 120)

A second consideration pertains to the elaboration of current forms. Because of the difficulty of teaching new behavior, to be efficient we must capitalize, when feasible, on current repertoires. Shaping and chaining are instructional strategies capable of producing elaboration of current forms that are either uninterpretable or imprecise. If a form such as a handwave is not understood by a listener due to spatial placement (hand extended sideways instead of upward) or articulation (hand is closed in a fist or there is no back and forth motion), then shaping by reinforcing successively closer approximations to the target form may produce a communicative social greeting. Similarly, if a learner produces nonspecific "help" requests on occasions in which the object

of the request is unclear, then a chaining strategy could be invoked by adding a new form (such as pointing) to enhance communicative precision.

The literature on challenging behavior is relevant to the third consideration: Some current forms are so unacceptable that they should not be retained in the individual's repertoire. It is important, however, to identify the effects or outcomes of the unacceptable behavior to determine functionally equivalent forms that might be taught as substitutes (see Durand, this volume). Although the unacceptable forms may need to be replaced, the situations and contexts in which they occur provide important information about *when* or the *conditions* (the context) under which the equivalent response needs to occur.

Goals Related to Function

If the focus of assessment is communicative function, then two goals are relevant. One is to identify the range of functions reflected in the learner's current repertoire; the second is to determine the functions required by the learner to be *successful* in current and future environments. To a large extent, one's *success* will actually determine what the current and future environments will be. That is, a major determinant of inclusion in integrated work, school, and recreational environments is the effectiveness and sophistication of one's communicative repertoire.

Once information is obtained on the learner's existing communicative functions and on those required in current and probable future environments, additional assessment efforts should focus on identifying the boundaries or limitations of "known" functions. That is, a learner may use a request to obtain a preferred material or food but not to access an activity or a person's attention. In this example, a goal for the request function may be to broaden or extend the conditions under which it is used.

One means of conceptualizing the conditions under which requests occur is to categorize them according to their function within a social exchange: initiate, maintain, or terminate. If the assessment reveals that requests are used to initiate but not to maintain or terminate interactions, then intervention efforts might focus on extending the conditions under which requests may occur, so that they may function to maintain or terminate an interaction. Reichle, Halle, and Johnston (1993) provide many examples of how requests, protests, and comments might be used to initiate, maintain, or terminate social exchanges.

In addition to extending the conditions under which known communicative functions occur, another goal of assessment is to identify new (i.e., unknown) communicative functions that are needed in current environments or will be needed in future environments. Decisions to broaden use of a learner's known repertoire or to teach new functions should be informed by and based upon a thorough ecological inventory that documents communicative demands in current and probable future environments. It is the discrepancy between current communicative competence and what is required to

interact effectively in integrated settings which provides a focus for intervention efforts. Ecological inventories will be described in more detail in the section labeled "Goals Related to Context."

Before completing the discussion of goals relevant to communicative function, it is important to emphasize a concern about our current framework for conceptualizing communicative function. We have borrowed from the child language literature on pragmatics and have divided social-communicative acts into a number of discrete functions according to the intent of the speaker. Unfortunately, the various functions do not appear to be mutually exclusive nor do they provide predictive or explanatory power to enhance our understanding of how communication is acquired. For example, once a particular function such as a greeting is acquired, the greeting may not be used in a flexible and generalized manner; rather, it appears to be a form under specific contextual control. A specific illustration is warranted.

If Jenny, an 8-year-old learner with severe disabilities, consistently requests "help" in getting her winter coat off by pointing to a symbol on a communication board, we might refer to the pragmatic function of the request either as a request for assistance or a request for action based on the form of the response and the context in which it is displayed. Alternatively, the same request could be considered as an escape response, one allowing Jenny to escape the unpleasant sensation of being too warm. Requests for assistance could serve either of two functions: (a) to access a highly preferred item or event, or (b) to escape an unpleasant event or situation. If this is true, then requests for assistance may be more appropriately labeled as a form and not as a function.

Reichle (1990) provided some empirical evidence for this argument. He found that by teaching requests for assistance only on occasions that permitted escape or avoidance of unpreferred activities, similar requests failed to occur on occasions that would have permitted access to highly preferred objects and events. The functions represented by these two occasions are very different; yet they may come to produce the same form -- a request for assistance. This concern about whether pragmatic functions are indeed functions or whether they operate more like forms has major implications for how we conceptualize, categorize, and assess communicative functions. The current perspective favors identifying the function of a communicative act in terms of the context in which it occurs and the effect it has on the environment.

Goals Related to Context

Context is equivalent to the conditions under which communicative responses occur. Some of these conditions affect the probability of responses, and some do not. The goals for communication assessment in terms of context are multifaceted. Three assessment questions are posed:

Question 1. What are the conditions under which current communicative acts occur, and are there other conditions that ought to occasion such acts? If a learner with severe disabilities greets family

members upon arriving home from school, but does not greet teachers or peers at school in the morning or clerks in stores when in the community, then the conditions under which greetings occur need to be extended.

Question 2. What are the communicative opportunities and demands (i.e., contexts) presented by current and probable future environments in which learners are expected to function? Careful analysis of these demands and opportunities yields critical information for ensuring that the content of communicative intervention is relevant to the learner's current and future life. This method of analysis is referred to as *ecological assessment* or *ecological inventory* (Brown, Branston, Hamre-Nietupski, Pumpian, Certo, & Gruenewald, 1979; Brown, Long, Udvari-Solner, Davis, VanDeventer, Ahlgren, Johnson, Gruenewald, & Jorgensen, 1989; Falvey, 1986; Ford et al., 1989; Sigafoos & York, 1991; Snell & Grigg, 1987). Brown et al. (1979) described a six-stage ecological inventory for curriculum development which is generic in terms of the skills identified. Sigafoos and York (1991) focused specifically on the use of ecological inventories to promote functional communication. They identified six assessment targets, including: (a) the communicative functions required to respond to environmental demands and opportunities, (b and c) the mode(s) and the specific vocabulary needed to respond effectively in the available contexts, (d) the natural cues and consequences that need to be made salient, (e) times during the day when instruction ought to occur, and (f) the determination of a sequence of teaching opportunities.

Although not often categorized under ecological assessment, general-case analysis (Horner, Sprague, & Wilcox, 1982) provides another means of surveying current and future environments to determine appropriate intervention targets (i.e., response classes), as well as a very precise listing of contextual conditions under which the target responses need to occur (i.e., stimulus classes). In the last few years, investigators have begun to extend general-case programming to communication and language (Chadsey-Rusch & Halle, 1992; Halle, Chadsey-Rusch, & Collet-Klingenberg, 1993; O'Neill, 1990; Romer, Cullinan, & Schoenberg, 1991).

Assessment information within the general-case model may extend beyond that produced by interviews, observations, analogues, and ecological inventories in two respects. First, when defining an instructional universe, an assessor needs to go beyond current and probable future environments. All of the contexts in which the targeted function would be considered appropriate need to be sampled. Second, variations in response forms which have the same functional effect on the listener need to be considered in the analysis. This emphasis on the identification of response classes is not shared by the other assessment strategies. Combinations of methods may be optimal. For example, ecological inventories assist in pinpointing contexts and occasions for particular forms and functions and, thereby, inform general-case analyses (see Table 2).

Question 3. What are the contextual conditions that influence communicative acts of fluent and sophisticated language users? It is interesting that this question has rarely been asked in reference to communication assessment of learners with severe intellectual disabilities. At first, the question may seem irrelevant for many of the learners with whom we interact; however, closer scrutiny may reveal that many of the same contextual conditions must be in place, regardless of the skills of the speaker, if we are to claim we have taught functional communication (see Table 2). Halle (1989) developed an "intuitive analysis" of social greetings and discovered that a number of contextual variables surfaced that had not been considered previously. The outcome of this intuitive analysis is elaborated in Attachment D.

A number of fascinating issues pertaining to assessment and intervention arise from this intuitive analysis. Four of the most intriguing ones are described and elaborated in the context of social greetings; however, their implications may apply to any communicative act.

Multiple or Conditional Control. This issue begins to capture the complexity that defines the determination of human behavior. We now realize that behavior is not determined by a single isolated stimulus; rather, many stimuli influence the evoking properties of other stimuli to determine which response will occur (Halle, 1987, 1989; Halle & Holt, 1991; O'Neill, 1990; Kaiser & Warren, 1988). Examples relevant to social greetings include: (a) the level of familiarity required to evoke a greeting may vary with gender and by setting; (b) the level of proximity required may vary by setting (e.g., church versus football stadium) and with familiarity; and (c) ulterior motives may override competing behavior and familiarity. We must understand these complex interactions of stimulus events, and we must include them in our models if we are to provide meaningful outcomes for learners with severe disabilities.

Function or Motivation of Communication. If we are to teach greetings to learners who lack this social skill, it is crucial that we understand why people greet one another. Typically, greetings function as a social event that permits the greeter to gain the attention of a listener; they also serve as an entree to extended interactions (e.g., they permit the maintenance of attention). Their function, however, may be to fulfill a necessary social obligation before accessing other reinforcers that are not social (e.g., objects, food, information). Finally, the same form of greeting (e.g., "How ya doin'?") may have multiple functions -- to access the attention of another as an entree to interaction, as well as a necessary prerequisite to access information or desired materials. This issue of assessing function or motivation in the context of social competence is discussed by Haring (1992).

Response Variation. We use a class of functionally equivalent responses (e.g., wave, smile, head nod, spoken forms) to greet, but the probability of any one form being used on a particular occasion is not equivalent and depends on the currently impinging stimulus conditions. That is,

form will vary depending on the greetee (e.g., peer, adult, stranger); proximity (e.g., near or far); environmental conditions (e.g., greetee in car with air conditioning on and windows up); and the amount of time since last greeting (e.g., earlier in day or six months ago). If a friend is driving the car with the windows up, you are likely to wave. However, if your friend is not looking at you, the form of your greeting may change to shouting, "Hey!" Very small changes in context render one or another form more functional and appropriate (i.e., likely to fulfill intent).

Continuum Variables. For those variables that fall along a continuum, teaching the point at which a discriminated response is to occur introduces tremendous ambiguity. For example, how familiar must a greetee be to occasion a greeting? And how does this level of familiarity interact with other variables like proximity, setting, gender, and availability? To the extent that the level of familiarity required to occasion a greeting depends (or is conditional upon) differing values of each of these other variables, the task of teaching flexible and appropriate greetings becomes extremely complex and difficult.

The intuitive analysis described above paints a picture of communicative behavior which is extremely complex in terms of its determinants. Such an analysis is not meant to discourage practitioners; rather, it highlights some variables that may be critical to the assessment process and yet have not often been considered. For example, in recent work at the University of Illinois at Urbana-Champaign, we attempted to teach initiated social greetings to two learners who actively avoided contact with other people. We failed to assess accurately the functional consequences of greetings for these individuals (i.e., the social consequences were not reinforcing and, thus, could not sustain the newly acquired greeting). For them, a better communication goal may have been to teach requesting (of objects, materials, or activities). Requesting would provide the learners with immediate access to desired items, as well as a history of positive experiences with people in the environment who mediate access to these preferred consequences. Such positive interactions may change the learners' responsiveness to others, making greetings an appropriate target.

Determining children's responsiveness to instruction and, thus, deciding when to provide intervention for specific skills have recently been discussed by Olswang, Bain, and Johnson (1992) under the rubric of dynamic assessement. The procedures comprising this assessment "systematically introduce adult guidance to determine if a child's perfomance can be enhanced through instruction" (p. 188). Such guidance is in contrast to that provided in more static norm- and criterion-referenced assessment, where adult input is held to a minimum to evaluate child performance unencumbered by adult influence.

Enhancing Dissemination and Utilization

If we are to improve our strategies of assessing communicative competence,

we must be able to respond to a set of pressing concerns related to dissemination and utilization which have plagued the field of communication and language as they have plagued every domain of practice. The concerns can be captured in a set of questions. The responses were developed to serve as a springboard for discussion; they are meant to be neither authoritative nor comprehensive.

1. *What do we really know about communication assessment practices for individuals with severe disabilities?*

a. Assessment has at least three distinct functions. First, it permits screening of individuals for identification and placement purposes. This function is descriptive and has evolved from current bureaucratic policy. It is not prescriptive and does not provide clear direction for intervention. The second function is prescriptive, providing information to facilitate decision-making about intervention. Evaluation is the third function of assessment. By gathering information before, during, and after intervention, one can determine its effects and make decisions about changing the ongoing program.

b. Communication assessment requires a joint focus on the learner (speaker) and the environmental context (including the listener) in which the communicative behavior occurs. The relationship between these two interactants and their dependence upon one another must be recognized.

c. Functional assessment in natural contexts produces representative samples of learner competence untapped by more traditional assessment strategies. By sampling performance in natural contexts, the cues that would ordinarily occasion communication (familiar people and physical settings) are present. Regular social partners may know how to evoke optimal performances. Also, sampling can continue until the assessors obtain the information required for decision-making. The combination of functional and traditional strategies will provide the most comprehensive picture of communicative competence.

d. Communication is an extremely complex event, and we have only begun to recognize and identify this complexity. Perhaps intuitive analyses that facilitate closer scrutiny of what influences our language will enhance efforts to develop more complex models of communication and its assessment.

2. *How can we get what we know into the hands of those who live and work with individuals who have severe disabilities?*

Typical methods have included preservice programs (coursework and supervised practica) at colleges and universities; inservice programs; consultation or collaboration in which one or both parties share expertise or new information with one another; and rules and regulations developed at the local, state, and federal levels. Unfortunately, many of the requisite skills cannot be acquired within the confines of the current formats. (Some may even question our impact on preservice and inservice training

priorities and activities, regardless of the fallability of these formats.) Because the target skills often are not informational but, rather, performance-based, they cannot be acquired with a reading assignment or in a lecture/workshop.

What is required is hands-on coaching, including modeling, rehearsal, prompting, and feedback at the site where the assistance is needed, accompanied by follow-up. These methods are labor-intensive and expensive. Preservice programs possess the potential, but the outcomes often are disappointing. Inservicing as it is currently practiced is flawed, because it represents a one-time-only visit. Even when follow-up occurs, it rarely permits the intensity of training required. Consultation suffers from limitations similar to those of inservicing. Finally, rules and regulations are hollow vehicles for the acquisition of performance skills, unless they contain a means of ensuring implementation fidelity, which would require the same type of coaching suggested above.

In many respects, this question is misguided, because it assumes that "we" have the answers and those who live and work with these individuals do not. This assumption is blatantly erroneous. All of the practices described in this paper were either developed or informed by those most familiar with learners who have severe disabilities. This one-way-street perspective must change: Professionals must recognize the substantial, latent contribution represented by those most familiar with the learner, and those most familiar must not look to professionals for all of the answers (they will certainly be disappointed). A collaborative effort is required.

If we are to see assessment practices in the field which actually reflect the practices described in this paper, then a more macro-approach than that alluded to in the paragraph above may be needed. Perhaps the U.S. Department of Education's Severely Handicapped Branch has a potential solution; it currently funds systems-change projects. A systems-change approach requires identification of barriers to the kind of utilization we desire. Aspects of current funding and training policies, administrative arrangements, certification, and service-delivery systems are implicated. For each of these, we should be able to identify specific recommendations that might make an appropriate dissemination effort a reality. Surveying successful systems-change models and identifying their solutions to the barriers above may prove to be a fruitful strategy for affecting change in practices impacting on the communicative competence of individuals with severe disabilities.

3. *What are "best practices," and what is their role in dissemination and utilization?*

Recently, "best practices" has become a commonly used phrase to represent what we, as a field (or a sample of we), believe are practices that reflect current thinking and ought to be disseminated. It is important to consider best practices from a pragmatic perspective, lest we lose sight of what they are and what they offer. Some best practices or

components of many best practices are not grounded with empirical evidence. This fact should not discourage their promulgation and dissemination, but it should be held up as a continuing consideration. Those living and working with individuals who experience severe disabilities cannot wait for the data, when they are faced with daily decisions about how to develop programs or how to respond to a currently impinging concern (Meyer, Eichinger, & Park-Lee, 1987). Furthermore, some best practices are driven more by values than by effectiveness (i.e., the practice reflects a value, and the question becomes how to obtain the greatest effect).

Once a practice is identified as a "best" practice, then practitioners and researchers need to determine the obstacles (e.g., policies, resources, old ways of doing things) that stand in the way of adoption and how best to remove these obstacles. Many best practices currently are in this stage. Finally, timeliness and relevance are major concerns when considering best practices. What is best practice today may not be so tomorrow. The field is ever-changing; new ideas and new perspectives are created almost daily. The ephemeral nature of best practice is at once its key strength and key weakness. The strength is born out of the adaptability of the field to change -- a willingness to consider and accept new ideas. The weakness is born out of this same willingness and acceptance. Slavin (1989) characterized the faddism in education innovation by "...its cycle of early enthusiasm, widespread dissemination, subsequent disappointment, and eventual decline..." (p. 752). He suggested that if education is to make "serious generational progress," then we must focus our efforts on ensuring the efficacy of our practices, rather than accepting ones that merely are new or sound good.

4. *How should the many assessment practices available be prioritized? If a communication specialist has only 50 minutes to assess a student, what might be some strategic assessment questions to ask?*

a. What environments are most conducive to communication?

b. Which people are most familiar with the individual?

c. How does the learner access other people?

d. How does the learner indicate preference?

e. How does the learner indicate rejection?

f. Is the environment responsive to communicative attempts?

g. What is the most appropriate response mode to select in light of the physical and cognitive skills of the learner? (Stremel, personal communication, 1992)

References

Alberto, P.A., & Troutman, A.C. (1990). *Applied behavior analysis for teachers* (3rd ed.). Columbus, OH: Charles E. Merrill.

Bijou, S.W., & Baer, D.M. (1961). *Child development I: A systematic and empirical theory*. Englewood Cliffs, NJ: Prentice-Hall.

Bijou, S.W., & Baer, D.M. (1965). *Child development II: Universal stage of infancy*. New York: Prentice-Hall.

Bijou, S.W., & Baer, D.M. (1978). *Behavior analysis of child development*. Englewood Cliffs, NJ: Prentice-Hall.

Bronfenbrenner, U. (1979). *The ecology of human development*. Cambridge, MA: Harvard University Press.

Brown, L., Branston, M.B., Baumgart, D., Vincent, L., Falvey, M., & Schroeder, J. (1978). Utilizing the current characteristics of a variety of current and subsequent least restrictive environments as factors in the development of curricular content for severely handicapped students. *AAESPH Review, 4*, 407-424.

Brown, L., Branston, M.B., Hamre-Nietupski, S., Pumpian, I., Certo, N., & Gruenewald, L. (1979). A strategy for developing chronological-age appropriate and functional curricular content for severely handicapped adolescents and young adults. *Journal of Special Education, 3*, 81-90.

Brown, L., Long, E., Udvari-Solner, A., Davis, L., VanDeventer, P., Ahlgren, C., Johnson, F., Gruenewald, L., & Jorgensen, J. (1989). The home school: Why students with severe intellectual disabilities must attend the schools of their brothers, sisters, friends, and neighbors. *Journal of the Association for Persons with Severe Handicaps, 14*, 1-7.

Chadsey-Rusch, J., & Halle, J.W. (1992, Fall). The application of general-case instruction to the requesting repertoires of learners with severe disabilities. *Journal of the Association for Persons with Severe Handicaps, 17*(3), 121-132.

Cipani, E. (1991). *A guide to developing language competence in preschool children with severe and moderate handicaps*. Springfield, IL: Charles C. Thomas.

Cirrin, F., & Rowland, C. (1985). Communicative assessment of nonverbal youths with severe/profound mental retardation. *Mental Retardation, 23*(2), 52-62.

Falvey, M. (1986). *Community-based curriculum: Instructional strategies for students with severe handicaps*. Baltimore: Paul H. Brookes.

Ford, A., Schnorr, R., Meyer, L., Davern, L., Black, J., & Dempsey P. (1989). *The Syracuse community-referenced curriculum guide for students with moderate and severe disabilities*. Baltimore: Paul H. Brookes.

Halle, J.W. (1987). Teaching language in the natural environment: An analysis of spontaneity. *Journal of the Association for Persons with Severe Handicaps, 12*, 28-37.

Halle, J.W. (1989). Identifying stimuli in the natural environment that control verbal responses. *Journal of Speech and Hearing Disorders, 54,* 500-504.

Halle, J.W., Chadsey-Rusch, J., Collet-Klingenberg, L., & Reinoehl, R. (1990). *Assessment of communicative competence.* Unpublished manual, University of Illinois, Champaign, Illinois.

Halle, J.W., Chadsey-Rusch, J., & Collet-Klingenberg, L. (1993). Applying stimulus control features of general-case instruction and interactive routines to enhance communication skills. In R.A. Gable & S.F. Warren (Eds.), *Advances in mental retardation and developmental disabilities: Research bases of instruction* (Vol. 5). London: Kingsley Publishers Ltd. (Available from Paul H. Brookes.)

Halle, J.W., & Holt, B. (1991). Assessing stimulus control in natural settings: An analysis of stimuli that acquire control during training. *Journal of Applied Behavior Analysis, 24,* 579-590.

Haring, T.G. (1992). The context of social competence: Relations, relationships, and generalization. In S. Odom, S. McConnell, & M. McEvoy (Eds.), *Social competence of young children* (pp. 307-320). Baltimore: Paul H. Brookes.

Horner, R.H., O'Neill, R.E., & Albin, R.W. (1991). *Supporting students with high intensity problem behavior.* Unpublished manuscript. University of Oregon, Eugene, OR.

Horner, R.H., Sprague, J., & Wilcox, B. (1982). General case programming for community activity. In B. Wilcox & G. Bellamy (Eds.), *Design of high school programs for severely handicapped students* (pp. 61-98). Baltimore: Paul H. Brookes.

Iwata, B., Dorsey, M., Slifer, K., Bauman, K., & Richman, G. (1982). Toward a functional analysis of self injury. *Analysis and Intervention in Developmental Disabilities, 2,* 3-20.

Kaiser, A., & Warren, S. (1988). Pragmatics and generalization. In R.L. Schiefelbusch & L.L. Lloyd (Eds.), *Language perspectives: Acquisition, retardation, and intervention* (pp. 393-442). Austin, TX: Pro-Ed.

Kantor, J.R. (1959). *Interbehavioral psychology.* Granville, OH: Principia Press.

McLean, J.E., & Snyder-McLean, L. (1988). Application of pragmatics to severely mentally retarded children and youth. In R.L. Schiefelbusch & L.L. Lloyd (Eds.), *Language perspectives: Acquisition, retardation, and intervention* (pp. 255-288). Austin, TX: Pro-Ed.

McLean, J.E., & Snyder-McLean, L. (1991). Communicative intent and its realizations among persons with severe intellectual deficits. In N. Krasnegor, D. Rumbaugh, R. Schiefelbusch, & M. Studdert-Kennedy (Eds.), *Biological and behavioral determinants of language development* (pp. 481-508). Hillsdale, NJ: Lawrence Erlbaum.

McLean, J.E., Snyder-McLean, L., Brady, N., & Etter, R. (1991). Communication profiles of two types of gesture using nonverbal persons with severe to profound mental retardation. *Journal of Speech and Hearing Research, 34,* 294-308.

Meyer, L., Eichenger, J., & Park-Lee, S. (1987). A validation of program quality indicators in educational services for students with severe disabilities. *Journal of The Association for Persons with Severe Handicaps*, *12*(4), 251-263.

Olswang, L.B., Bain, B.A., & Johnson, G.A. (1992). In S.F. Warren & J. Reichle (Eds.), *Causes and effects in communication and language intervention* (pp. 187-215). Baltimore: Paul H. Brookes.

O'Neill, R.E. (1990). Establishing verbal repertoires: Toward the application of general case analysis and programming. *The Analysis of Verbal Behavior, 8,* 113-126.

O'Neill, R.E., Horner, R.H., Albin, R.W., Storey, K., & Sprague, J.R. (1990). *Functional analysis: A practical assessment guide.* Sycamore, IL: Sycamore Publishing Company.

Peck, C.A. (1989). Assessment of social communicative competence: Evaluating environments. *Seminars in Speech and Language, 10,* 1-15.

Peck, C.A., & Schuler, A.L. (1987). Assessment of social/communicative behavior for students with autism and severe handicaps: The importance of asking the right question. In T. Layton (Ed.), *Language and treatment of autistic and developmentally disordered children.* Springfield, IL: Charles C. Thomas.

Peck, C.A., Schuler, A.L., Haring, T.G., Willard, C., Theimer, R.K., & Semmel, M.I. (1986). Teaching social/communicative skills to children with autism and severe handicaps: Issues in assessment and curriculum selection. *Child Study Journal, 16,* 297-313.

Reichle, J. (1990). *The influence of object preference on the use of generalized requesting and rejecting skills.* Unpublished manuscript, University of Minnesota, Minneapolis.

Reichle, J. (1991). Developing communicative exchanges. In J. Reichle, J. York, & J. Sigafoos (Eds.), *Implementing augmentative and alternative communication: Strategies for learners with severe disabilities* (pp. 133-156). Baltimore: Paul H. Brookes.

Reichle, J. (1992). *Communicative form and function matrix.* Unpublished manuscript, University of Minnesota, Minneapolis.

Reichle, J., Halle, J.W., & Johnston, S. (1993). Developing an initial communicative repertoire: Applications and issues for persons with severe disabilities. In A.P. Kaiser & D.B. Gray (Eds.), *Enhancing children's communication: Research foundations for intervention* (Vol. 2, pp. 105-136). Baltimore: Paul H. Brookes.

Reichle, J., & Sigafoos, J. (1991). Establishing spontaneity and generalization. In J. Reichle, J. York, & J. Sigafoos (Eds.), *Implementing augmentative and alternative communication: Strategies for learners with severe disabilities* (pp. 157-172). Baltimore: Paul H. Brookes.

Reichle, J., & Yoder, D. (1979). Communication behavior for the severely and profoundly mentally retarded: Assessment and early stimulation strategies. In R. York & E. Edgar (Eds.), *Teaching the severely handicapped* (Vol. 4, pp. 180-218). Seattle: American Association for the Education of the Severely/Profoundly Handicapped.

Romer, L.T., Cullinan, T., & Schoenberg, B. (1991). *General case instruction of requesting behaviors: A demonstration and analysis.* Unpublished manuscript.

Siegel-Causey, E., & Guess, D. (1987). *Enhancing nonsymbolic communication interactions among learners with severe disabilities.* Baltimore: Paul H. Brookes.

Sigafoos, J., & York, J. (1991). Using ecological inventories to promote functional communication. In J. Reichle, J. York, & J. Sigafoos (Eds.), *Implementing augmentative and alternative communication: Strategies for learners with severe disabilities* (pp. 61-70). Baltimore: Paul H. Brookes.

Skinner, B.F. (1957). *Verbal behavior.* Englewood Cliffs, NJ: Prentice-Hall.

Slavin, R.E. (1989). PET and the pendulum: Faddism in education and how to stop it. *Phi Delta Kappan, 70*(10), 752-758.

Snell, M.E., & Grigg, N.C. (1987). Instructional assessment and curriculum development. In M.E. Snell (Ed.), *Systematic instruction of persons with severe handicaps* (3rd ed., pp. 64-109). Columbus, OH: Charles E. Merrill.

Snyder-McLean, L., Rogers, N., & Etter, R. (1987). *A comparison of three sources of communication data.* A presentation at the annual conference of The Association for Persons with Severe Handicaps.

Vicker, B.A. (1985). *Recognizing and enhancing the communication skills of your group home clients.* Bloomington, IN: Indiana University Developmental Training Center.

Wahler, R.G., & Fox, J.J. (1981). Setting events in applied behavior analysis: Toward a conceptual and methodological analysis. *Journal of Applied Behavior Analysis, 14,* 327-338.

Warren, S.F., & Kaiser, A.P. (1988). Research in early language intervention. In S.L. Odom & M.B. Karnes (Eds.), *Early intervention for infants and children with handicaps: An empirical base* (pp. 89-108). Baltimore: Paul H. Brookes.

Warren, S., Yoder, P., Gazdag, G., & Kim, K. (in press). Facilitating prelinguistic communication skills in young children with developmental delay. *Journal of Speech and Hearing Research.*

Wetherby, A. M., & Prizant, B. M. (1989). The expression of communicative intent: Assessment guidelines. *Seminars in Speech and Language, 10,* 77-91.

Resources

AAC Journal. Lyle Lloyd (Ed.). Editorial offices at Purdue University in West Lafayette, IN. [AAC]

AAC Handbook. A publication of the American Speech-Language Hearing Association (ASHA). [AAC]

Beukelman, D., & Mirenda, P. (1992). *Augmentative and alternative communication: Management of severe communication disorders in children and adults.* Baltimore: Paul H. Brookes. [AAC, literacy, receptive language]

Beukelman, D., Yorkston, K., & Dowden, P. (1985) *Communication augmentation: A casebook of clinical management.* Austin, TX: Pro-Ed. [AAC]

Broen, P.A. (1988). Plotting a course: The ongoing assessment of language. In R. L. Schiefelbusch & L.L. Lloyd (Eds.), *Language perspectives: Acquisition, retardation, and intervention* (pp. 299-320). Austin, TX: Pro-Ed. [linguistic structure, semantic content, receptive language]

Calculator, S., & Bedrosian, J. (1988). *Communication assessment and intervention for adults with mental retardation.* Boston: College Hill Press.

McLean, J.E., & Snyder-McLean, L.K. (1978). *A transactional approach to early language training.* Columbus, OH: Charles E. Merrill. [receptive & expressive linguistic skills, semantic content]

Musselwhite, C.R., & St. Louis, K.W. (1988). *Communication programming for persons with severe handicaps* (2nd ed.). Boston: College Hill Press.

Reichle, J., York, J., & Sigafoos, J. (1991). *Implementing augmentative and alternative communication: Strategies for learners with severe disabilities.* Baltimore: Paul H. Brookes. [AAC, receptive & expressive skills]

Rowland, C., & Schweigert, P. (1991). *A.C.E. Analyzing the communication environment: An inventory of ways to encourage communication in functional activities.* Portland, OR: Oregon Research Institute. [AAC, ecological assessment]

Siegel-Causey, E., & Guess, D. (1989). *Enhancing nonsymbolic communication interactions among learners with severe disabilities.* Baltimore: Paul H. Brookes. [AAC, receptive & expressive skills]

Warren, S.F., & Reichle, J. (1992). *Causes and effects in communication and language intervention.* Baltimore: Paul H. Brookes. [AAC, receptive & expressive skills, linguistic structure, semantic content, dynamic assessment]

Wetherby, A., & Prizant, B. (1990). *Communication and Symbolic Behavior Scales - Research Edition.* Chicago: Riverside Publishing. [an assessment tool]

Attachment A

Two Examples of
Communication Interviews

Halle et al. (1990).

Communication Interview
Summary Form

Student: _____ Interviewer: _____ Person Summarizing: _____

Dates of interviews: First: _____ Second: _____

Who? _____ Who? _____

KEY:

HOME
SCHOOL

FUNCTION / FORM	MOTORIC	CRY, VOCALIZE	FACIAL EXPRESSION	PHYSICAL CONTACT	GESTURE, POINT	ALTERNATIVE VERBALIZE	ANTECEDENT STIMULI Home	School
Expressive/Receptive Skills								
1. How answers yes/no								
2. How answers other questions								
3. How responds to directions								
6. Other ways to tell things								
Requests								
8. Attention from others								
9. Affection from others								
10. Getting another to join in an activity								
11. Food/Water (interoceptive)								
12. Joining an on-going activity								
13. Help to finish or obtain needed item								
14. Help to obtain desired item								
15. Permission								
16. Clarification								
17. Persisting if request denied								
Rejects/Protests								
18. Protest if other leaves activity								
19. Protest R-activity								
20. Refuse offered food or drink								
21. Stop activity								
22. Refuse to follow directions								
23. Persisting if rejection is not met								
Declarations/ Comments								
24. Show something at store								

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COMMUNICATIVE BEHAVIORS

A. MOTORIC BEHAVIORS- Actions that are interpreted by the environment
1. pacing/running 2. manipulating objects/items 3. stopping an activity 4. self-injurious behavior (e.g., hitting, pinching or biting self) 5. complying with a request/direction 6. body rocking 7. jump up and down 8. balk/not comply 9. leave area 10. approaches & stands/sits in proximity of listener(s)

B. CRIES/VOCALIZATIONS- Unintelligible utterances that are not word approximations
1. laughter or giggling 2. cries, whimpers, screams/ tantrum 3. shouting 4. verbal approximations which are unintelligible 5. gurgling sounds 6. other vocal sounds

C. FACIAL EXPRESSION - Suggests expectancy of a response from the listener
1. smiles 2. frowns 3. clenched face 4. grimace 5. expectant looks (e.g., eyebrows raised, steady gaze toward another) 6. sad/pout (e.g., eyes drooped, looking down, mouth turned down, pursed mouth or eyebrows) 7. questioning looks (eyebrows raised, blank stare) 8. frightened or scared expression 9. eyes closed

D. PHYSICAL CONTACT - Any touching or physical manipulation of the listener
1. hugging 2. grabbing &/or holding hand/arm of listener 3. handshakes 4. kiss 5. tapping or touching shoulder or other parts of the listener's body 6. aggression (e.g., pinching, scratching, hitting, kicking, biting, or grabbing) 7. pulling on listener 8. pushing listener away

E. GESTURE/ POINT - Conventional gestures that are used with intent
1. reaching for objects or people 2. pantomime or mimicking others 3. shake head "yes/no" 4. showing items (e.g., holding item and extending toward listener) 5. shrugging shoulders while raising hands 6. waving arms or hands 7. pointing with finger, hand, or arm 8. pushing away/ dropping/ putting down objects

F. ALTERNATIVE FORMAL COMMUNICATION SYSTEMS (AFCS)- Presentation of words or concepts through graphic, electronic, sign-language or other means
1. pictures 2. line drawings 3. word cards 4. one word sign 5. two word sign combination (noun/verb, noun/prep., verb/prep.) 6. electronic equipment (e.g., touch-talkers etc.) 7. objects or object remnans 8. symbols 9. communication board, book or wallet, 10. written 11. fingerspelling

G. VERBALIZE - Any spoken word, word combinations, or word approximations.
1. approximations which are understandable
2. one word utterance (typically noun or verb, or preposition)
3. two or more word utterances (typically noun and verb, noun/preposition, verb/preposition)
4. echolalic utterances relevant to interaction
5. echolalic utterances nonrelevant to interaction

NO - informant has not observed behavior
NR - learner does not exhibit function or behavior described
IA - answer provided by informant can not be interpreted
NA - question not asked by interviewer

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COMMUNICATION INTERVIEW

Student _____ School _____

Examiner _____ Date _____

CUE QUESTIONS	Crying	Aggression	Tantrums/Self Injury	Shakes "no"/Nods "yes"	Facial Expression	Passive Gaze	Gaze Shift	Proximity	Gestures/Pointing	Gives Object	Pulling Other's Hand	Touching/Moving Other's Face/Body	Grabs/Reaches	Enactment	Removes Self/Walks Away	Vocalizations/Noise	Intonation	Inappropriate Echolalia	Appropriate Echolalia	One-Word Speech	One-Word Signs	Complex Speech	Combined Signs	FUNCTIONS COMMENTS
1 REQUESTS FOR AFFECTION/ INTERACTION What if S wants																								1 REQUESTS FOR AFFECTION/ INTERACTION
adult to sit near?																								
peer to sit near?																								
non hand peer to sit near?																								
adult to look at him?																								
adult to tickle him?																								
to cuddle/embrace?																								
to sit on adult's lap?																								
other																								
2 REQUESTS FOR ADULT ACTION What if S wants																								2 REQUESTS FOR ADULT ACTION
help with dressing?																								
to be read a book?																								
to play ball/a game?																								
to go outside/to store?																								
other																								
4 PROTEST What if																								4 PROTEST
common routine is dropped?																								
favorite toy/food is taken away?																								
taken for ride w/out desire?																								
adult terminates interaction?																								
required to do something doesn't want to do?																								
other																								

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COMMUNICATION INTERVIEW

CUE QUESTIONS	Crying	Aggression	Tantrums/Self Injury	Shakes "no"/Nods "yes"	Facial Expression	Passive Gaze	Gaze Shift	Proximity	Gestures/Pointing	Gives Object	Pulling Other's Hand	Touching/Moving Other's Face/Body	Grabs/Reaches	Enactment	Removes Self/Walks Away	Vocalizations/Noise	Intonation	Inappropriate Echolalia	Appropriate Echolalia	One-Word Speech	One-Word Signs	Complex Speech	Combined Signs	FUNCTIONS COMMENTS
3 REQUESTS FOR OBJECT, FOOD, OR THINGS What if S wants																								3 REQUESTS FOR OBJECT, FOOD, OR THINGS
an object out of reach?																								
a door/container opened?																								
a favorite food?																								
music/radio/T V ?																								
keys/toy/book?																								
other																								
5 DECLARATION/ COMMENT What if S wants																								5 DECLARATION/ COMMENT
to show you something?																								
you to look at something?																								
other																								

Layton, T. L. (Ed.). (1987). Language and Treatment of Autistic and Developmentally Disordered Children, pp. 40-42. Springfield, IL: Charles C. Thomas Publisher.

Attachment B

An Observational Recording Protocol

Direct Observation Of Communicative Behavior

LEARNER:_____ DATE:_____ SETTING:_____ TIME:_____

OBSERVER:_____ TAPE COUNTER START:_____ STOP:_____

Augmentative																		
Gesture/Point																		
Physical Contact																		
Facial Expression																		
Vocalization/Cries																		
Responds																		
No Response																		
ANTECEDENT-Teacher																		
Peer																		
Parent																		
Sibling																		
Other *********																		
****** busy																		
attending																		
directing																		
questioning																		
commenting																		
other prompts																		
referent present																		
referent absent																		
other																		
FUNCTION - Reject																		
Humor																		
Comment																		
Greet																		
Leave-take																		
Offer Assistance																		
Request ******																		
****** object																		
food																		
action																		
activity																		
attention																		
affection																		
assistance																		
permission																		
information																		
FUNCTION FULFILLED																		
FUNCTION NOT FILLED																		
CONSEQUENCES - Edible																		
Tangible																		
Exchangeable																		
Activity																		
Social																		
Sensory																		
None																		

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SOCIAL INTERACTION OBSERVATION GUIDE

Student: _____ Observer: _____
Length of Observation: _____ Context: _____ Date: _____

INITIATION SKILLS (e.g. Approaches, Touches, Offers Object, Gestures, Vocalizes, Signs/Speaks, Other)

Description/Context:

RESPONDING SKILLS (e.g. Reorients Toward, Imitates, Complies w/Directives, Gestures, Vocalizes, Signs/Speaks, Other)

Description/Context:

MAINTENANCE SKILLS (e.g. Maintains Proximity (Follows), Imitates, Alternates/Reciprocates (Action), Takes Turns, Offers Objects, Vocalizes, Signs/Speaks, Other)

Description/Context:

TERMINATION SKILLS (e.g. Reorients Away, Moves Away, Gestures, Signs/Speaks, Other)

Description/Context:

LEVEL OF PEAY (e.g. Unoccupied, Isolate, Onlooker, Parallel, Associative, Cooperative)

Description/Context:

Layton, T. L. (Ed.). (1987). Language and Treatment of Autistic and Developmentally Disordered Children, p. 45. Springfield, IL: Charles C. Thomas Publisher.

Attachment C

Structured Protocols for Evoking Specific Communicative Functions

Communicative Functions

Procedures

Targeted Functions: Greeting, Reject (food), Request (food), Comment (event)

Participants: Preferred familiar adult and student

Setting: Classroom at school, at round table by blackboard. No materials present in immediate area except for scenario props

Time: During lunch while room is relatively empty

Materials: Two clear, closed containers, one holding a preferred food item (or for the preferred food - leave in original packaging), the other a non-preferred food item; plastic or metal serving dish, two small, plastic bowls, napkins; Fast-food items (e.g., sandwich, fries, drinks); an empty fast-food sandwich container; A small round sponge (clean) to put in sandwich containers.

••••••

REQUEST (Food)

1. A. places clear container (holding preferred food) in sight of, but out of reach of S.	Count 5 S.	If S. indicates that s/he wants some of the preferred food, but doesn't use his or her targeted form, A. jumps to step 8, and proceeds to step 13 If S. responds with the correct form, give him or her some food (but no verbal praise), and proceed to the next scenario.
2. A. places a very small portion of food in serving bowl (also out of reach of S.)	" 5 S.	
3. A. places small bowl or napkin in front of self and S.	" 5 S.	
4. A. empties serving bowl into own bowl or on napkin and looks at S.	" 5 S.	
5. a. eats a bite of food, and looks at S.	" 5 S.	
6. A. finishes serving, and looks at S.	" 5 S.	
7. A. comments, "This is good You should have some."	" 5 S.	
*8. A. says, "Do you want some?"	" 5 S.	
9. A. passes empty serving bowl to S.	" 5 S.	
10. A. looks in bowl, then at S., and says, "oh, it's empty."	" 5 S.	
11. A points at container, and says, "there is more."	" 5 S.	
12. A. says, "tell me 'want eat'" and models signs	" 5 S.	
13. A. gives S. a small serving, regardless of response and says, "Here is some if you want it."	" 5 S.	

If S. rejects the food item, repeat the trial with another food item

COMMENT/DECLARATION (One)

While A. and S. are in room eating snack together, someone knocks on the door. It continues while A. completes the following protocol:

1. A. ignores knock	Count 15 S.	If S. indicates awareness of person at door, but doesn't respond with the targeted form, A. jumps to step 4. If S. responds with the targeted form, A. opens door and then proceeds to next scenario.
2. A. looks at S. with expectant expression (i.e., leans body toward S., and raises eyebrows)	" 5 S.	
3. A. says, "Do you hear something?"	" 5 S.	
*4. A. says, "Tell me someone's at the door" and models pointing at door	" 5 S.	

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REQUEST FOR ASSISTANCE PROTOCOL

Student: _____ School: _____
Examiner: _____ Date: _____

With student seated across from you, demonstrate procedure by opening and eating a piece of the food inside, or if a favorite material is used, playing with it momentarily. Then replace the lid on the container tightly so that student cannot obtain the item without help or hand the toy to the student. Remain passive until conventional request for assistance is made. If there is no response within one minute, repeat demonstration and elaborate as necessary. Check any behavior(s) exhibited each trial.

BEHAVIORS	Context 1:			Context 2:			Context 3:		
Trials:	1	2	3	1	2	3	1	2	3
Vocalizations									
Related Verbalizations									
Unrelated Verbalizations									
Immediate Echolalia									
Context Appropriate Delayed Echolalia									
Context Inappropriate Delayed Echolalia									
Manipulation of Lid									
Box is Moved into Teacher's Hand									
Pulling of Teacher's Hand									
Eye Contact w/Teacher Initiated by Student Gaze Shift: Student Looks at Box, Back to Teacher, Repeatedly									
Student Gestures for Help (Including Pointing)									
Aberrant Behavior (Include Self-Injury, Crying & Whining)									
Signed Request									
Spoken Request (Describe: Direct/Indirect/ Polite/Grammatically Complex/Rudimentary)									
Other Behaviors (Describe):									
1) _____									
2) _____									
3) _____									
4) _____									

Layton, T. L. (Ed.). (1987). Language and Treatment of Autistic and Developmentally Disordered Children, p. 43. Springfield, IL: Charles C. Thomas Publisher.

Attachment D

Intuitive Analysis of Variables Relevant to Teaching Social Greetings

Intuitive Analysis of Variables Relevant to Teaching Social Greetings

a. Visual Contact	The learner must see or hear the person to be greeted. That is, the presence of another person must be determined through a sensory modality.
b. Inter-response duration	Some amount of time must elapse between greetings. For example, it would be inappropriate to greet your parents upon awakening in the morning and then greet them 10 minutes later. Inter-response duration for greetings, however, is influenced by a change in settings (i.e., greetings become more probable after a shorter time if one partner leaves the setting and returns later). Change in response form is another consideration when a second greeting occurs. For example, one may smile instead of deliver a "full" greeting as a function of having greeted someone earlier in the day.
c. Familiarity	Familiarity is a continuum-based variable -- an almost infinite variation of levels exists. As familiarity increases, the probability of a greeting increases, but this variable may be influenced by regional custom, setting, and gender. For example, a greeter may be more likely to greet a stranger in a small midwestern town than in New York City, or a woman may be more likely to greet another woman than a man when both are only somewhat familiar.
d. Proximity	Like familiarity, as proximity increases, so may the probability of greetings (another continuum variable). Proximity may be influenced by setting and familiarity. For example, one is not likely to greet someone at a distance during a church or temple service, but may do so at a football game or in a park. Also, if one is very familiar with a potential greetee, proximity may not be required, whereas if the potential greetee is a casual acquaintance, proximity may assume greater weight.
e. Availability of greetee	The probability of a greeting is increased if the greetee establishes eye contact with the greeter and is reduced if the greetee is "busy" (e.g., looking away or working on a task). Interrupting a "busy" person may violate a social norm. Availability is a continuum concept with eye contact at one end and a "busy" greetee at the other. This variable, however, is influenced by distance (eye contact may not be discernible) and familiarity (if familiar and well-liked, even a busy greetee may occasion greetings).
f. Ulterior motive	The probability of a greeting increases if the greeter wants information or assistance or wants to share information with a potential greetee. These variables, grouped together as ulterior motives, constitute additional functions of language. Their influence may override that of competing behavior, distance, or lack of familiarity in occasioning a greeting. That is, social practices dictate that often before we make a request of someone, we should greet them. This variable highlights the role of the function of or motivation for greetings and relates to the second criterion for selection of participants. The motivation for delivering greetings is multiply determined. On any particular occasion, social consequences such as attention or maintenance of interaction may be primary, but ulterior motives also may be operating.
g. Positioning of greeter and greetee	All combinations of two levels of positioning may come to affect the probability of greetings: sitting/standing is one level, and stationary/moving is the second. Because this is an irrelevant variable, varying combinations must be represented in training.
h. Setting, gender, and age	The probability of greetings may increase if the setting is considered safe and familiar (e.g., near home or in neighborhood). Furthermore, an increased probability may exist for greeting individuals of the same gender. Gender as a variable may be influenced by familiarity and setting (e.g., woman may be less likely to greet a less familiar male than a less familiar female, especiallly if the setting is also unfamiliar). Age of the greetee may interact with familiarity to influence the response form produced. We will greet a good friend in a different way than we greet his less familiar mother.